

CLAIMS

What is claimed is:

5        1. A device for securing a suture to a swaged needle, the suture having a suture end, the swaged needle having a pointed end, and a blunt needle hole end having a needle hole extending longitudinally therein, comprising:

10        a crimping block having a top, a first end, a second end fully opposite from the first end, at least one receptacle extending into the crimping block from the first end, a suture channel associated and coaxial with each receptacle and extending into the crimping block from the second end, the suture channel in communication with the receptacle, and a crimping opening in communication with each receptacle; and

15        a crimping arm having a bottom surface and having a crimping position and an open position, the bottom surface having a protrusion associated with each receptacle such that when in the crimping position said protrusion extends into the crimping opening associated with said receptacle, such that when the needle hole end has been inserted into the said receptacle and the suture has been inserted through the suture channel and into the needle 20 hole, the protrusion may be pressed downward upon the needle to crimp the needle to mechanically connect the suture with the suture.

2. The device for securing a suture to a swaged needle as recited in claim 1, wherein the crimping arm is hingeably attached to the crimping block such that when in the crimping position the bottom surface of the crimping arm selectively extends substantially parallel to the top surface of the crimping block; and wherein the crimping arm has an open position wherein the crimping arm extends at an acute angle to the crimping block.

10 3. The device for securing a suture to a swaged needle as recited in claim 2, wherein the receptacle has an end wall substantially midway between the first and second sides of the crimping block for limiting travel of the needle hole end into the block; and wherein each suture channel is tapered inward toward the end wall for guiding the suture toward the end wall and into the needle hole of the needle in the needle hole end when the needle has been inserted into the receptacle.

20 4. The device for securing a suture to a swaged needle as recited in claim 3, wherein a plurality of receptacles are provided, the receptacles of varying diameters for accommodating various sized needles.

25 5. The device for securing a suture to a swaged needle as recited in claim 4, wherein the first side has needle size indicia for indicating the size of needles appropriate for use in each of the receptacles.

6. The device for securing a suture to a swaged needle as recited in claim 5, wherein each receptacle has a surface bevel at the first side for guiding the needle into said receptacle.

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7. A method of securing a suture to a swaged needle, the suture having a suture end, the swaged needle having a pointed end, and a blunt needle hole end having a needle hole extending longitudinally therein, using a crimper including a crimping block and a crimping arm, the crimping block having a top, a first end, a second end fully opposite from the first end, a receptacle extending into the crimping block from the first end, a suture channel associated with each receptacle and extending into the crimping block from the second end, the suture channel in communication with the receptacle, and a crimping opening in communication with each receptacle, the crimping arm having a bottom surface having a protrusion, comprising the steps of:

20 inserting the needle into the receptacle by extending the needle hole end into the first side of the crimping block;

inserting the suture end into the needle hole by inserting the suture end into the suture channel;

25 connecting the suture and needle mechanically by crimping the needle hole end around the suture end by engaging the protrusion with the needle hole end by pressing upon the crimping arm by the user; and

withdrawing the mechanically connected suture and needle by withdrawing the crimping block from the first end, and pulling the suture through the crimping block out from the first end.

5       8. The method of securing a suture to a swaged needle as recited in claim 7, wherein the crimping arm is hingeably attached to the crimping block, and wherein the step of engaging the protrusion with the needle hole end further comprises pivoting the crimping arm to a crimping position wherein the bottom surface 10 thereof is substantially parallel to the top surface of the crimping block.

15       9. The method of securing a suture to a swaged needle, wherein the receptacle has an end wall substantially midway between the first and second end of the crimping block, the suture channel is in communication with the receptacle through the end wall; and wherein the step of inserting the needle into the receptacle further comprises inserting the needle into the receptacle until it reaches the end wall.

20       10. The method of securing a suture to a swaged needle as recited in claim 9, wherein a plurality of receptacles are provided of varying diameters; wherein suture channels are provided such that each is uniquely associated with one of the receptacles; and wherein the step of inserting the needle further comprises choosing one of the receptacles which closely diametrically matches the needle.

11. The method of securing a suture to a swaged needle as recited in claim 10, wherein each suture channel is tapered inward toward the end wall; and wherein the step of inserting the suture 5 end into the needle hole further comprises guiding the suture end toward and past the end wall by the tapered suture channel.